

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claim in the application:

Listing of Claims:

1 to 16: (Canceled)

17. (Currently amended) Startup circuit for a power supply, said startup circuit comprising:

an input for connecting a source of high voltage thereto,
an output rail for feeding rectified voltage to the power supply,

a first ~~energy storage device~~ capacitor coupled to the output rail for storing energy when voltage is first applied to the input,

a second ~~energy storage device~~ capacitor coupled to an output of the power supply for storing energy when a voltage appearing at the output of the power supply reaches substantially steady state, and

a switching circuit coupled to the first energy storage device and to the second energy storage device and being responsive to the first energy storage device having sufficient energy for transferring said energy to the second energy storage device and disconnecting the first energy storage device from the output rail;

~~characterized in that~~ wherein:

the power supply is a universal or variable power supply that is adapted to operate over a range of power supply voltages fed to said input,

a starting resistor is coupled between the output rail and the first energy storage device for sourcing current to the first energy storage device, [[and]]

a current source is connected to the input for charging the first capacitor, and

a first input of a first comparator is coupled to an output of the first capacitor and a second input of the first comparator is coupled to a first reference voltage for generating a first switching signal when the output of the first capacitor exceeds the first reference voltage;

a first input of a second comparator is coupled to an output of the second capacitor and a second input of the second comparator is coupled to a second reference voltage for generating a second switching signal when the output of the second capacitor exceeds the second reference voltage;

the switching circuit is responsive to the first energy storage device capacitor having sufficient energy for disconnecting the starting resistor from the output rail; and

the switching circuit is responsive to the first switching signal for changing from an initially open circuit wherein the first capacitor is isolated from the second capacitor to a closed circuit whereby the first capacitor is connected in parallel with the second capacitor; and is responsive to the second switching signal for disabling charge flow to the first capacitor.

18. (Previously presented) The startup circuit according to claim 17, being part of a power supply for an LED lighting system.

19 to 21. (Canceled)

22. (Currently amended) The startup circuit according to claim [[21]]17, wherein the switching circuit includes:

a first switch coupled to the current source and having an initial state wherein the current source is coupled to the

first capacitor and having a second state wherein the current source is decoupled from the first capacitor, and

a second normally open switch coupled between respective outputs of the first and second capacitors.

23. (Previously presented) The startup circuit according to claim 22, wherein the first and second switches include semiconductor devices.

24. (Previously presented) The startup circuit according to claim 23, wherein the first and second switches are bipolar junction transistors.

25. (Currently amended) The startup circuit according to claim [[21]] 17, wherein the first comparator includes a zener diode.

26. (Currently amended) The startup circuit according to claim [[21]] 17, wherein the second comparator includes a zener diode.

27. (Currently amended) The startup circuit according to claim [[21]] 17, wherein the current source includes a transistor for feeding current through a resistor.

28. (Currently amended) The startup circuit according to claim [[21]] 17, wherein the switching circuit includes a first switch comprising resistors in combination with a transistor for controlling the current source.

29. (Currently amended) The startup circuit according to claim [[21]] 17, wherein the switching circuit includes a second switch comprising resistors in combination with a transistor.

30. (Currently amended) A universal or variable power supply including a startup circuit, said startup circuit including:

a first ~~energy storage device~~ capacitor coupled to the output rail for storing energy when voltage is first applied to the input,

a second ~~energy storage device~~ capacitor coupled to an output of the power supply for storing energy when a voltage appearing at the output of the power supply reaches substantially steady state, and

a switching circuit coupled to the first energy storage device and to the second energy storage device and being responsive to the first energy storage device having sufficient energy for transferring said energy to the second energy storage device and disconnecting the first energy storage device from the output rail;

~~characterized in that~~ wherein:

the power supply is a universal or variable power supply that is adapted to operate over a range of power supply voltages fed to said input,

a starting resistor is coupled between the output rail and the first energy storage device for sourcing current to the first energy storage device, [[and]]

a current source is connected to the input for charging the first capacitor, and

a first input of a first comparator is coupled to an output of the first capacitor and a second input of the first comparator is coupled to a first reference voltage for generating a first switching signal when the output of the first capacitor exceeds the first reference voltage;

a first input of a second comparator is coupled to an output of the second capacitor and a second input of the second comparator is coupled to a second reference voltage for generating a second switching signal when the output of the second capacitor exceeds the second reference voltage;

the switching circuit is responsive to the first energy storage device capacitor having sufficient energy for disconnecting the starting resistor from the output rail; and

the switching circuit is responsive to the first switching signal for changing from an initially open circuit wherein the first capacitor is isolated from the second capacitor to a closed circuit whereby the first capacitor is connected in parallel with the second capacitor; and is responsive to the second switching signal for disabling charge flow to the first capacitor.

31. (Previously presented) The universal or variable power supply according to claim 30, being an integral unit.

32. (Previously presented) The universal or variable power supply according to claim 30, being part of an LED lighting system.

33. (Previously presented) The universal or variable power supply according to claim 30, including a power factor correction circuit.

34. (Canceled)